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ABSTRACT

This study was undertaken to explore the cultural stereotype that boys are more object-oriented and girls are more people-oriented. A total of 38 white, middle class, preschool children were observed during their free play hour at nursery school when a variety of people and objects were freely available to them. Each child was observed with a time sampling method for approximately 50 minutes over three nonconsecutive days. The observer, who was not aware that sex was a relevant variable, rated the children's play behavior with regard to its focus and context. The focus was categorized as being directed toward people, objects, or other and the context as being solitary, parallel, associative, or cooperative play. The mean scores on focus and context were summed to form a single index of People versus Object Orientation. The results showed no differences between boys and girls on People versus Object Orientation or on either of the component measures of focus or context. One minor difference between the sexes was that the most object-oriented and the most people-oriented children tended to be boys, while most girls tended to divide their attention fairly evenly between people and objects. (Author/JMB)

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People vs. Object Orientation in Preschool Boys and Girls*

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People vs. Object Orientation in Preschool

Boys and Girls

One of our cultural stereotypes is that boys and men are more interested in objects whereas girls and women are more interested in people. This stereotype has sometimes found its way into the scientific literature. For example, in an extensive review of the literature on sex differences, Garai and Scheinfeld (1968) concluded that it is "reasonably well established....(that) from earliest infancy on, males exhibit a greater interest in objects and their manipulation whereas females show a greater interest in people and a greater capacity for the establishment of interpersonal relationships (p. 270)." Similar conclusions have been reached by Hutt (1972) in a separate review of the literature; and T. Moore (1967) has based a theory of intellectual development upon these presumed sex differences in interest.

Despite these repeated assertions of sex differences in interest in people and objects, little empirical evidence supports this notion. Garai and Scheinfeld, for example, cite only a single study of children under six years (Goodenough, 1957) to support their conclusion. In this study, Goodenough found that preschool girls, in comparison to boys, more frequently drew people in spontaneous drawing and more frequently mentioned people in spontaneous conversation with a tester. Goodenough's conclusion that girls show more interest in people was highly inferential as she did not observe the everyday activities of

the children. In two other empirical studies, in which the play activities of young children were actually observed, the authors have also interpreted their findings as indicating sex differences in people versus objects. In both of these studies, the observational systems used were quite differentiated and differences found in a single category of play were interpreted as reflecting differences in interest in people or objects. In the first study, Brindley, Clarke, Hutt, Robinson, and Wethli (1973) found that girls engaged in "significantly and substantially more social interactions" than boys. However, if this category of social interaction is combined with three others that seem to indicate an equally strong interest in people, (that is, "rough and tumble," "running, chasing play," and "agonistic interactions") then the differences are sharply reduced and seem most unlikely to be statistically significant. (It is not possible to compute a new t-test from the published data.) In the second study, Pedersen and Bell (1970) found that boys more frequently "manipulated physical objects" than did girls. However, if this category of play is combined with a separate category of "manipulating clay and dough," then the sex differences disappear. One additional study by Little (1968, 1969) is quite frequently cited to support the notion of sex differences in interest. Yet only brief abstracts of this research have been published, and neither the methods nor the results are clearly stated; furthermore, only a single oblique reference is made in these abstracts to findings of sex differences. In summary, there is only weak empirical evidence

to support the notion that preschool girls are more interested in people while boys are more interested in objects.

In contrast to the weak evidence favoring sex differences, ten additional studies were found that indicated no sex differences in interest in people versus objects in young children. Table 1 contains a list of these studies and their findings (as well as the studies previously discussed). [illegible] of these ten studies were individual differences in interest in people versus objects specifically asessed; instead, degree of interest must be inferred from such variables as frequency of peer and adult social interaction, (Reuter & Yunik, 1973), degree of social participation (i.e., amount of group, parallel, and self play) (Smith & Connolly, 1972), or amount of alone play (Heathers, 1955). Perhaps because of the indirectness of these studies, current thinking on sex differences in young children (see for example, Post & Hetherington, 1974; Matheny, Dolan & Wilson, 1974; Waldrop & Halverson, 1975) continues to suggest that differences in interest do exist despite the preponderance of empirical findings favoring no sex differences.

Method

The present study directly examined the issue of preferences for different types of interactions. The observed interactions were classified into a scale of People versus Object Orientation, which was defined as the proportion of time the children were observed to interact with people as compared to objects. To assess Orientation, the children were observed when a variety of people and objects were

freely available to them in a setting that was part of their everyday life, that is, the nursery-school free play hour.

Two aspects of play behavior relating to degree of interest in people and objects were differentiated. The first and most important aspect was the focus of attention, which was determined mainly by where the child's eyes were directed. Possible categories were people, objects, both, or other; 'other' consisted of activities that could not be adequately described as attention to people or objects, such as play with pets or listening to music. The second aspect was the interpersonal context of play; that is, was the child engaged in solitary, parallel, associative, or cooperative play (see Parten, 1932). The use of the two measures, focus and context, in observing play behavior allowed the accurate recording of play behavior that did not fit the concept of a single dimension of Orientation. For example, a child assisting others in building a fort while discussing plans would be coded as having an object focus, but a social (that is, associative) context. Conversely, solitary role-playing, for example feeding a doll, would be coded as having a social (that is, people) focus but a solitary context. In actual fact, play activities like these, involving a social focus but a non-social context or vice versa, were found to be quite rare. Thus most of the children's play behavior could be adequately characterized as either people oriented or object oriented.

Both focus and context were rated once a minute on a three-point scale, with three indicating a focus on people or a social context.

The mean scores on focus and context were summed to form a single index of People vs. Object Orientation. Each child was observed with a time sampling method for about 50 minutes over three nonconsecutive days. The observer was not aware that sex was a relevant variable. Inter-observer reliability of the observational categories was established prior to the collection of data. Reliability coefficients were .93 for focus and .98 for context.

The sample consisted of 38 white, middle class children from three suburban nursery school classes. There were 22 boys and 16 girls. Their mean ages were the same: 4 years and 10 months for both the boys and the girls.

Results and Discussion

The results were quite clear. No differences were found between boys and girls in mean scores on People vs. Object Orientation (t = .41, n.s.), nor on either of the component measures, that is, the focus of attention (t = .42, n.s.) or the interpersonal context of play (t = 1.47, $p = .15$). On the measure of focus, the boys' mean score was 2.04 and the girls' mean score was 2.00, indicating that both boys and girls divided their attention evenly between people and objects. Scores on context were considerably higher, 2.6 for the boys and 2.7 for the girls, indicating that most of the children's play occurred in a social group involving either associative or cooperative play (both scored as three for the present purposes). In short, boys and girls were indistinguishable in the degree of interest they showed to people and objects.

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The issue must be raised of whether the present measures of Orientation were sensitive enough to detect possible sex differences. In another aspect of the study, scores on focus, context, and Orientation were found to relate to certain intellectual abilities as predicted (see Jennings, in press), thereby suggesting that the present measures were sensitive to a meaningful dimension of individual differences.

One minor qualification must be made to the assertion of no sex differences. The variance of the boys' scores was significantly greater than that of the girls' on Orientation (F (21, 15) = 3.29, $p < .05$) and context (F (21, 15) = 3.13, $p < .05$) and approached significance on focus (F (21, 15) = 2.39, $p < .10$). That is, the most object-oriented children and the most people-oriented children tended to be boys. Most girls, on the other hand, tended to be in the middle of the distribution, dividing their attention fairly evenly between people and objects. It is difficult to find a satisfactory interpretation of these differences in variance. The central issue, however, is the lack of mean differences between sex groups; boys and girls did not differ in their interest in people versus objects.

Conclusions

The assertion that boys are more thing-oriented and girls are more people-oriented fits in well with our cultural stereotypes of the nature of boys and girls. Perhaps this is why the notion is so popular--even in scientific circles. Despite this popularity, there is very little evidence to support the notion. Quite the contrary, the findings

from the present study indicate that preschool boys and girls are quite similar in this respect, and this conclusion is bolstered by the findings of quite a number of other studies in which interest in people and objects has been less directly assessed. There may well be differences in the manner in which preschool boys and girls interact with people and differences in what objects they choose to manipulate; but in terms of global interest or orientation, preschool boys and girls seem indistinguishable.

The issue of whether girls, as compared to boys, are more interested in people or more sociable can be approached in a number of different ways. In the present paper, the specific question asked was whether girls, as compared to boys, more frequently interacted with people than objects. Maccoby and Jacklin (1974), in their recent review of the literature over a large age range, approached the issue of possible sex differences in sociability in a number of other ways. For example, they looked at sensitivity to social cues, friendship patterns, susceptibility to social influence, and achievement motivation for tasks with objects as compared to social tasks. From these other perspectives, Maccoby and Jacklin concluded that girls do not differ from boys in sociability.

Thus there now exists a large body of findings refuting the notion that girls are more people-oriented and boys more object-oriented. Nonetheless this notion persists, perhaps because of our tendency to remember a result that fits in with our established way of thinking, while quickly forgetting a dozen other results that disconfirm our

stereotypes. The findings of the present study clearly indicate that when both people and objects are freely available, preschool boys choose to interact with people about as frequently as girls do and, vice versa, preschool girls tend to interact with objects about as frequently as boys do.

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Table 1

Studies of Sex Differences in Interest

in People versus Objects

Study	Source of Data	Major Findings
A. Studies of sociability in play in preschool children		
Heathers, 1955	Observations of nursery-school free-play behavior (N = 20, age = 2 yrs., N = 20, age = 4 - 5 yrs.)	No sex differences in time spent in social play or in amount of social interaction.
McCandless & Marshall, 1957	Observations of nursery-school free-play behavior (N = 48)	No sex differences in amount of positive or negative interactions with peers or with adults.
Walters, Pearce & Dahms, 1957	Observations of nursery-school free-play behavior (N = 124, age = 3 - 5 yrs.)	No sex differences in amount of positive social interactions, verbal or physical.
Clark, Wyon & Richards, 1969	Observations of nursery-school free-play behavior (N = 40, age = 3½ yrs.)	No sex differences in sociability (number of companions/interval).
Barnes, 1971	Observations of nursery-school free-play behavior (N = 42, age = 3 - 5 yrs.)	No sex differences in amount of cooperative play, associative play, or parallel play.
Smith & Connolly, 1972	Observations of nursery-school free-play behavior (N = 40, age = 3 - 4 yrs.)	No sex differences in participation (composite of group, parallel, and self play).
Brindley, Clarke, Hutt, Robinson & Wethli, 1973	Observations of nursery-school activities (N = 40, age 3½ - 5 yrs.)	Girls engaged in significantly more "Social interaction" ($p < .01$); but if category of "Social interaction" is combined with "Rough and tumble," "Running/chasing," and "Agonistic," sex differences are drastically reduced, surely not significant.

Table 1 (Cont.)

Study	Source of Data	Major Findings
Reuter & Yunik, 1973	Observation of nursery-school activities (N = 131, age = 3 - 5 yrs.)	No sex differences in percentage of time spent in social interaction with peers or with adults.
Whiting & Edwards, 1973	Cross-cultural observational study of 7 cultures, including United States (N = 24 in most cultures; age = 3 - 11 yrs.)	No sex differences in greeting or in initiating or engaging in friendly interaction.
Jennings, in press	Observations of nursery-school free-play behavior (N = 38, age = 4½ yrs.)	No sex differences in People vs. Object Orientation (a composite of focus of attention and interpersonal context of play)
B. Studies of play with objects of solitary play in preschool children		
Heathers, 1955	(see above)	No sex differences in time spent in alone play.
Clark, Wyon & Richards, 1969	(see above)	No sex differences in time spent alone.
Pedersen & Bell, 1970	Observations of nursery-school activities (N = 55, age = 2½ yrs.)	Boys more often manipulated physical objects (e.g., blocks, toys); girls more often manipulated clay and dough. No sex differences when manipulating objects is combined with manipulating clay and dough.
Barnes, 1971	(see above)	No sex differences in amount of solitary play.
Laosa & Brophy, 1972	Observations of kindergarten free-play behavior (N = 93, age = 5½ yrs.)	No sex differences in amount of solitary play.
N. Moore, Evertson & Brophy, 1974	Observations of nursery-school free-play behavior by classroom teachers (N = 116, age = 5½ yrs.)	No sex differences in amount of solitary play.

Table 1 (Cont.)

Study	Source of Data	Major Findings
Jennings, in press	(see above)	(see above)
C. Other empirical studies		
Honzik, 1951	Scenes constructed during doll play under instructions to make an "exciting scene out of an imaginary moving picture." (N = 163, age 11 yrs., N = 164, age 12 yrs., N = 154, age 13 yrs.)	Girls used more persons (dolls) in their scenes; boys used more blocks and vehicles.
Goodenough, 1957	Spontaneous drawings (N = 247, age = 2 - 4 yrs.); Spontaneous verbalizations during testing (N = 52, age = 2 - 4 yrs.)	Girls more frequently drew people; girls more frequently mentioned people.
Little, 1968, 1969	Method and subjects unclear. A paper-and-pencil scale for measuring differential interest was developed. (Only very brief summaries of this research are published.)	Findings unclear. Only reference to sex differences is as follows: "...females, relative to males, appear to specialize in persons rather than things (Little, 1968) at the behavioral and interest levels (1969, p. 608)
Cramer & Hogan, 1975	Replication of Honzik's study. Scenes constructed during doll play under instructions to make an "exciting scene out of an imaginary moving picture" (N = 45, age 3 - 6 yrs., N = 47, age = 9 - 12 yrs.)	Girls used more persons (dolls) in their scenes (both age groups); boys used more blocks and vehicles (both age groups).